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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,580	04/04/2006	Hiroshi Kawato	287297US0PCT	9317
22850 7590 05/10/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER VO, HAI	
			ART UNIT 1771	PAPER NUMBER
			NOTIFICATION DATE 05/10/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/574,580

Applicant(s)

KAWATO ET AL.

Examiner

Hai Vo

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1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 04/04/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language of claim 1 appears to be grammatically ambiguous so as not to clearly and accurately convey the spatial relationship of the claimed elements. The current phraseology is unclear as to how the layers are arranged. The scope becomes unclear since it is not determinable what structure can fall within the scope of the claim. Various interpretations, including some radically different arrangements are possible but do not seem within the scope of the disclosed invention. It is unclear as to what is meant by "a light-resisting layer ***incorporated into*** a foam layer". Is the light-resisting layer embedded within the foam layer? Clarification is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4, 9-11, and 14 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over by Hay et al (US 2004/0043234). Hay teaches a light management film comprising a substrate and a UV stable coating layer laminated to the substrate (paragraphs 24 and 27). The substrate is a foam material made from a blend of resorcinol acrylate polyester and polycarbonate (paragraph 24). The substrate has a thickness of 0.0015 to 0.08 in (paragraph 45). The light management film has a light reflectance of 100% (paragraph 34). Turning to the present specification, Applicants state that when the value of S/D is 15 or more, high reflectance is obtained. Likewise, the light reflectance of 100% would simply suggest that the foam would substantially have the S/D value within the claimed range so as to attain the high reflectance. It appears that the light management film meets all the structural limitations and chemistry as required by the claims; therefore, it is the examiner's position that the color difference will be inherently present as like material has like property. It seems from the claim, if one meets the structure recited, the properties must be met or Applicant's claim is incomplete. The light management film could be laminated with a metal plate (paragraph 34). Accordingly, Hay anticipates or strongly suggests the claimed subject matter.

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6. Claims 2, 3, 6-8, 12, 13, 15, 16, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hay et al (US 2004/0043234) as applied to claim 1 above, and further in view of Funaki et al (US 2006/0159926). Hay does not teach polycarbonate resin is a copolymer of polycarbonate and polysiloxane. Funaki, however, teaches a light-reflecting sheet comprising a polycarbonate resin base and a light-fast layer laminated to the polycarbonate resin base (abstract). Funaki discloses the polycarbonate resin is a copolymer of polycarbonate and polysiloxane such as PDMS (paragraphs 44 and 55). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a copolymer of polycarbonate and polysiloxane in combination with an arylate polyester polymer motivated by the desire to impart the flame retardancy to the light management film.

Hay does not teach a UV stable coating layer having a thickness of from 0.4 to 20 μm . Funaki teaches the light reflection sheet wherein the light-fast layer is made from an acrylic copolymerized with UV light absorbing component (paragraphs 112, 115-117). The light-fast layer has a thickness of 0.2 to 20 μm (paragraph 125). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use UV stable coating layer having a thickness of from 0.4 to 20 μm motivated by the desire to obtain satisfactory UV absorbing performance while maintaining high reflectance of the light management film.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an acrylic copolymerized with UV light absorbing

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component as a UV stable coating layer motivated by the desire to stabilize the coating layer against thermal and light degradation and thus providing the coating layer with excellent weather resistance, and improved durability.

7. Claims 6-8, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hay et al (US 2004/0043234) as applied to claim 1 above, and further in view of WO 00/02964. Ogawa et al (US 6,703,139) will be relied on as an equivalent form of WO 00/02964 for convenience. Hay does not teach a UV stable coating layer having a thickness of from 0.4 to 20 μm and a claimed composition. Ogawa teaches a weather resistant composition comprising a reaction product of a bisbenzotriazolyphenol, an acrylate and a curing agent (abstract). Likewise, Ogawa discloses the weather resistant composition comprising a copolymer of an acrylic and UV light absorbing component, having a thickness of 1 μm (column 25, lines 1-15). The composition coating has been applied to synthetic resin substrate for providing excellent weather resistance and transparency for a longed period in addition to superior mechanical strength, wear resistance, scratch resistance and chemical resistance (column 16, lines 40-60). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use UV stable coating layer made from an acrylic copolymerized with UV light absorbing component, having a thickness of 1 μm motivated by the desire to obtain satisfactory UV absorbing performance in addition to excellent weather resistance and improved durability.

Conclusion

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on Monday through Thursday, from 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hai Vo

HV

**HAI VO
PRIMARY EXAMINER**